Best Practices Manual

Construction Association of Prince Edward Island
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Introduction:

These "Best Practices" are the result of a group effort by a construction industry panel, charged with the intent of improving the construction industry standard for documentation and construction of projects, through continuing dialogue and conclusive recording of the identified items of concern. These items have been complied into this binder to create a resource base for industry participants.

This Construction industry panel is comprised of Federal and Provincial Public Works management, Architects, all major disciplines of engineering, general contractors, mechanical and electrical contractors and specialty contractors all striving to achieve a balance of input toward this aim.

These "Best Practices" are meant to be an experienced guideline towards an improved industry standard of practice and are provided solely for general illustration and instruction purposes. The information contained herein is not binding on industry participants and is not a definite guide to industry standards and guidelines. Any reliance on the information contained in this manual is solely at the user's own risk. Each project has unique circumstances that should be fully investigated and evaluated by the appropriate individuals. The Construction association of Prince Edward Island and participating organizations do not guarantee the accuracy of, nor assume liability for, the information contained herein.

"May we continue to learn as if we were to live forever"

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Reference # 0.1 Alternative Bids

History: Tender calls frequently use requests for alternate bids as an opportunity to solicit pricing on a range of products and/or systems.

This Practice:

Puts additional time pressures on trades when preparing a tender, effectively transfers partial or complete design responsibilities to trades which presents an opportunity for an uneven playing field.

Rational: Canadian Standard Construction Document CCDC 23, 1982 entitled "A Guide to Calling bids and Award Contracts, as endorsed by ACEC, CCA, CSC and RAIC presents on page 10-6 a standard form for Receiving Alternate Bids, when appropriate.

This form clearly identifies the alternative work as NOT included in the stipulated price.

CSA Standard Construction Document CCA-29-1995 entitled "A Guide on Standard Contracting and Bidding Procedures" in Section 2.10.1 Alternative Price identifies:

"Alternate, separate, itemized, and unit prices complicate the preparation and evaluation of the bid; therefore, they should be avoided. If these prices are required, the bid document should specify that the prices be provided within 48 hours after the bid closing by the lowest bidder only.

Alternate Price:

Alternate price refers to a substituted item or section of the work; the price is added to or deducted from the base bid price.

The awarding of contracts should be based on the lowest base bid or, if specified in the bid documents, on the lowest combination of base bid and acceptable alternative prices. Unsolicited alternatives should not be considered in contract award.

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Separate Price:

Separate price indicates the price for work to be added to or deducted from the base bid price, if selected by the Owner. The separate price is not included in the base bid price and does not affect the selection procedure."

Alternate bids are not intended for use for "fishing" or a substitution for sound design and documentation in preparation for tender.

Proposal: Use of alternate prices be limited to the greatest degree possible. Where used, the full impact of the alternate price be incorporated into the tender drawings and specifications to clearly identify the alternate systems. Alternate prices not be used to access lowest bid unless specifically identified in the specifications.

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Reference # 1.1 Tender Document Co-ordination Requirements

History: There has been some confusion in the past caused by drawings not having the proper information on the sheets and/or drawings that don't coordinate with specifications and/or sheets that don't coordinate with each other. This allows room for errors and has caused arguments during the project, as to who should have carried the cost for specific work.

Rational: To ensure that each section of the drawings better coordinates with each other sheet of the drawings and the specifications, and to better ensure a proper bidding process by removing confusion during the project.

Proposal: It is proposed that the drawings be reviewed at intervals during the design stage and also between disciplines, to better ensure that each section coordinates with each other.

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Reference # 1.2 Co-ordination / Interference Drawings

History: In some instances, wording in specifications have been ambiguous as to whether actual co-ordination drawings were actually required or not.

Co-ordination and interference drawings on some projects would have proven to be a very credible resource to removing collisions between trades on projects, which have had very tight space and elevation allotments.

This type of co-ordination has historically also been coordinated by verbal discussions between trades, on site or during project meetings.

Rational:

The specifications are intended to provide clear directions as to whether such drawings are part of the administration of a specific project or not.

It may well be in the best interest of the project to produce detailed drawings, coordinating the actual layout of all plumbing and heating piping, sprinkler piping, ventilation ducting, oxygen piping, etc. in relation to actual routing and elevation as they may relate to structural elements and physical space provisions.

It is generally the intent to ensure that all contractors have an equal Opportunity to bid fairly and competitively, which is in the best interest of the owner.

Proposal: Review specifications and drawings notes to ascertain the actual need for Co-ordination / Interference drawings and clearly state wording within specifications to the requirements of such needs.

Referrals: Division 01 - 1.3 Fair Wording of Specifications

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Reference # 1.3 Fair Wording of Specifications

History: In some instances, wording in specifications may have been introduced that placed unreasonable and unfair onus on the Contractor. Wording should be written to provide clarity and/or direction, without intentions of creating "catch all" statements. Such unfair clauses are likely neither enforceable nor legal.

Rational: The notes on drawings and specifications are intended to provide clear direction in order that quantities of materials, time and plant may be allocated to complete the work.

The development of drawings and specifications are intended to reflect a fair environment where the Contractor may bid on known quantities and conditions and the Owner may be expected to pay fair market value for known quantities and conditions.

The intent of the preparation of working drawings is to do the necessary investigation, research and design, and to document the results clearly and fairly.

In some circumstances, conditions simply do not permit a full investigation to clarify all uncertainties. Where such circumstances exist, a fair approach should be taken where Contractors are requested to provide a fixed price on known conditions and a "Cash Allowance" "Unit Price" or other mechanism be allowed to accommodate unknown conditions at the time of the tender.

Time and cost implications of the various options should be reviewed with the owners.

Proposal: Review specifications and drawing notes to remove and/or rewrite wording which is intended to achieve unattainable, unfair or unreasonable goals.

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Reference # 1.4 Safety & Health Concerns of Existing Sites

History: As with the presence of asbestos, there are other areas of concern that are becoming increasingly more prevalent in today's construction workplaces. This mostly pertains to renovation projects where there are pre-existing conditions such as bird droppings, chemical storage and usage, air quality, etc. Testing for these types of hazards may not have been performed prior to tender closing. This could result in the associated risk factor being excessively accounted for due to either guesswork assessments, carried by multiple bidders, or not having been allowed for at all.

As with asbestos, lack of testing has caused project delays due to project shutdowns, from Occupational Safety officers. These hazards are an item of Occupational Health & Safety concern and thus must be addressed fairly to owner and contractual bidders.

Rational: Creates fair risk allocation, schedule adherence and promotes safe working conditions on the construction projects of today.

Proposal: Assessment of possible safety and health risks associated with a site begins from the start of a project. Whether this process begins with the owner, the contractor or the consultants, it is paramount that the owner be encouraged to undertake a health and safety assessment of the site. Owners should be encouraged that testing be performed prior to preparation of tender documents, so as to allow testing results to be complied and published within the tender specifications. These recommendations should also, when applicable, take into consideration the impacts of building occupancy during testing and construction.

Referrals:

Division 1	-	1.3	Fair Wording of Specifications
Division 1	-	1.6	Asbestos Abatement Testing

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Reference # 1.5 Environmental Assessments

History: Today's construction owners, consultants and contractors must be sensitive to environmental concerns in the building process whether it be in the civil, demolition & removal of waste or actual construction aspects of the job. Some concerns are water systems, streams, rivers and other bodies of water, atmosphere, landfill, etc. In some cases the contractors have not been made aware of the possible environmental concerns. This could result in the associated risk factor being excessively accounted for due to guesswork assessments, carried by multiple bidders or not allowed for at all.

Lack of knowledge or research in this area has caused many project delays due to project shutdowns from environmental officers. Some of these concerns are actually covered by law and must be addressed fairly to owner and contractual bidders.

Rational: Creates fair risk allocation, assists schedule adherence and promotes safe working conditions by allowing the environmental preservation on the construction projects of today.

Proposal: Assessment of possible environmental risks associated with a site begins from the start of a project. Whether this process begins with the owner, the contractor or the consultants, it is paramount that the owner be encouraged to undertake an environmental assessment of the site. Factors for consideration could include, but not be limited, to the following; soils testing, waste removal and recycling issues. Findings of these assessments should be considered in the planning phase and the reports should be available to the general contractors during the bidding process.

Referrals: Division 1 - 1.3 Fair Wording of Specifications

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Reference # 1.6 Asbestos Abatement Testing

History: Asbestos testing has been an item of contention due to the fact that more often than not, testing is randomly performed or simply not performed at all prior to tender closing. This resulted in the associated risk factor being excessively accounted for due to guesswork assessments or worse yet carried by multiple bidders.

Lack of Asbestos Abatement testing has caused many project delays due to project shutdowns, from Stop Work Orders of OH & S Safety officers.

Asbestos Abatement is an item of Occupational Health and Safety concern and thus must be addressed fairly to the Owner and Contractual bidders.

Rational: Creates fair risk allocation, schedule adherence and safe working conditions on the construction projects of today.

Proposal: Consultants and/or owners should perform a qualified method of testing for asbestos on projects prior to tender calling, or specify a Cash Allowance to cover the costs of unknown testing value for tendering purposes.

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Reference # 1.7 Cutting & Patching

History: Cutting and Patching has historically been an item of confusion at tender closings regarding location in specifications.

Cutting and Patching has occasionally been an item of negotiation after tender closings, due to the loophole created by the occasional inconsistency in specification location.

Item has historically cost owners monies, due to multiple trades carrying a value for their interest in cutting and patching.

Rational: Creates a consistent location in all tender documents

Proposal: It is proposed that all Cutting & Patching shall be carried under the General conditions in Division 1000 of the National Master Spec (NMS)

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Reference # 16.1 Electrical / Mechanical / Service Space Requirements

History: Room and space requirements, are sometimes undersized for the equipment contents of the designed space and also do not have sufficient area space to allow trades to perform installation tasks comfortably and safely. These areas sometimes lack provision for future expansion facilitation at economical costs; sometimes, even within the time span of project duration.

Rational: This ensures that Mechanical and Electrical consultants will review the required space allotment with regards to both present and immediate near future physical equipment needs and trade personnel concerns. This also ensures that attention to the Electrical Code is covered with regards to the sizing of the room in relation to the electrical service sizing.

Proposal: Architectural, Electrical and Mechanical consultants should review sizing of electrical / mechanical and service rooms both singly and together to ensure the best interests of owners, codes, maintenance and serviceability are addressed both at the initial design stage and with each design change prior to final drawings.

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Reference # 16.2 Mechanical Equipment's Electrical Requirements

History: Some projects are presented where electrical connections for mechanical equipment are not consistent with the tendered electrical system.

Rational: To ensure that all specified mechanical equipment will have the proper electrical connections.

Proposal: It is proposed that the consultants (Mechanical & Electrical) tender packages be fully co-ordinated during the project design stage to reduce / prevent discrepancies during tendering and construction in servicing mechanical equipment with power.

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Reference # 16.3 Electric Heat

History: There is a history of confusion surrounding the responsibility for the supply and installation of electric baseboard radiation, electric unit heaters, electric force flow heaters and electric duct mounted coils.

Confusion over this responsibility could result in increased costs to owner as a result of more than one contractor carrying associated values for this work.

Rational: Creates a specific location in all tender documents.

Proposal: It was determined that electric heating units will be supplied and installed by Division 16 except for duct mounted coils which are by Division 15.

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Reference # 16.4 Light Standard Bases

History: Light standard bases are generally shown on drawings, but not consistently on either electrical or site plans, nor are any specific directions given as to who should supply and install them. This leads to negotiations at time of tender close or after tender award.

Rational: Creates consistent location in all tender documents.

Proposal: It is proposed that light bases complete with conduit and fasteners will always be supplied and installed by the General Contractor.

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